Methods and Devices for Coding or Decoding an Audio Signal or Bit Stream

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Field of the Invention

The present invention relates to methods and devices for coding or decoding an audio signal or bit stream which are able to perform error-tolerant entropy coding or decoding and in particular error-tolerant Huffman coding or decoding.

Background of the Invention and Prior Art

Modern audio coding or decoding methods, which operate according to the standard MPEG layer 3 for example, are capable of compressing the data rate of audio signals by a factor of 12 for example without causing any noticeable deterioration in the quality of these signals. To obtain such a high data rate reduction an audio signal is sampled, resulting in a sequence of discrete-time samples. As is known in this branch of technology, this sequence of discrete-time samples is windowed using suitable window functions to obtain windowed blocks of temporal samples. A block of temporal windowed samples is then transformed into the frequency domain by means of a filter bank, a modified discrete cosine transform (MDCT) or some other suitable method to obtain spectral values which together represent the audio signal, i.e. the temporal section which consists of the block of discrete-time samples, in the frequency domain. Normally temporal blocks which overlap by 50% are generated and are transformed into the frequency domain by means of an MDCT. Because of the special properties of the MDCT, 1024 discrete-time samples for example always result in 1024 spectral values.